

**705141 Rev. A**

**ICX123 Installation Kit  
 AID P/N705141 Rev. A**

The models ICX123, ICX223, ICX323, ICX423, ICX523, ICX623 and ICX823 three-field ionization chambers are designed for use with the Fuji FCR 9501-ES Chest Stand. The specific model ion chamber to be used is determined by the generator / AEC type (refer to the following table).

MODEL	GENERATOR / AEC
ICX123	AID Compatible <sup>1</sup>
ICX223	GE Compatible
ICX323	Philips Compatible
ICX423	RMS/Fischer/Varian Compatible
ICX523	Bennett Compatible
ICX623	Continental, GTR Labs, Keithley Compatible
ICX823	Picker Compatible

**Equipment Required**

Each ion chamber includes a 17 foot cable, AID P/N 75062-17 (ICX823 uses P/N 75054-17), to run from the ion chamber pre-amplifier to the cable exit of the Fuji FCR9501-ES. In addition, this kit includes the following items.

PART NO.	DESCRIPTION	QUANTITY
51434	Grid Mounting Spacer Plate	2
51435	Grid Guide Spacer Plate	2
51436	Grid Sensor Flag Spacer Plate	1
54002	Cable Tie	6
54003	Adhesive Cable Tie Mount	2
59575	M3 X 6 Phillips Pan Head Screws	2
59576	M4 X 16 Phillips Flat Head Screws	4
59580	M4 X 6 Phillips Pan Head Screws	2

<sup>1</sup> AID compatible ion chambers are designed for use with Advanced Instrument Development, Inc.'s Expos-AID automatic exposure controls as well as those produced by other manufacturers such as Acoma, Control-X, Electromed, Gendex, Innerscan, OEC, Summit Industries, etc.

Additional cabling will be required to run from the cable exit of the Fuji FCR 9501-ES Chest Stand to the x-ray generator AEC. The following table lists cables that are available from AID. These cables are available in 45, 65 and 85 foot lengths. Specify cable length as a suffix to the cable part number (-XX). For example, “75035-45” is a 45-foot length of the standard 9-pin sub-d cable.

AID Part Number	Description	Ion Chamber Connector	AEC Connector
75015-XX	Philips compatible	Female 9-pin sub-d	Male 14-pin AMP M Series (201355-1)
75030-XX	GE compatible (MSI, MST & DXS generators)	Female 9-pin sub-d	Male 15-pin AMP Mate-N-Lock (1-480324-0)
75035-XX	Standard ICX cable	Female 9-pin sub-d	Male 9-pin sub-d
75043-XX	RMS/Fischer compatible	Female 9-pin sub-d	Male 14-pin AMP M Series (201355-1)
75045-XX	GE compatible	Female 9-pin sub-d	Male 14-pin AMP M Series (201355-1)
75047-XX	Picker compatible	Female 9-pin sub-d	Female 15-pin Molex (1625-15P)
75048-XX	GE Compatible (MPX generators)	Female 9-pin sub-d	Female 15-pin AMP M Series (205606-3)
75049-XX	ICX cable with flying leads	Female 9-pin sub-d	Supplied by installer
75054-XX	Picker Compatible	Female 9-pin sub-d	Male 3-pin Molex (03-06-1032) And Male 9-pin AMP (1-640511-0)
75059-45	Bennett Compatible (45 foot length only)	Female 9-pin sub-d	Female 11-pin in-line
75061-XX	ICX cable with fork lugs	Female 9-pin sub-d	#6 fork lugs
75062-XX	ICX interconnection cable	Female 9-pin sub-d	Male 9-pin sub-d with fixed mounting hardware
75066-XX	GE compatible European Pin-out	Female 9-pin sub-d	Male 14-pin AMP M Series (201355-1)

## Installation Procedure

1. Remove the covers from the Fuji FCR 9501-ES Chest Stand exposure unit in the following sequence.  
Top Cover, Right-Hand Side Cover, Front Cover, Bottom Cover.
2. Remove the two (2) POM bushings and two (2) M3 screws. See Figure 1.
3. Remove the grid assembly. See Figure 1.
4. Remove the two (2) grid roller bearings. Remove the two (2) upper screws which mount the upper IP positioning unit stop plates, leaving the lower screws to hold these plates in position. See Figure 1.
5. Reinstall each of the grid roller bearings on top of one of the grid mounting spacer plates, provided, using the roller bearing to hold the spacer plate in place. See Figure 2.
6. Remove the lower screws which mount the upper IP positioning unit stop plates, leaving the roller bearings and spacer plates to hold the stop plates in position. Retain these screws, they will be used to mount the ion chamber. See Figure 2.
7. Remove the grid sensor flag from the grid assembly. Replace the two (2) existing grid sensor flag mounting screws with the two (2) M3 X 6 pan head screws, provided. Remount the grid sensor flag to the grid assembly with the grid sensor flag spacer beneath it. See Figure 2.
8. Remove the two (2) POM guides. Replace the four (4) existing M4 x 12 flat head screws with the four M4 X 16 flat head screws provided. Mount each of the two (2) grid guide spacer plates, provided, under the POM guides as shown using two (2) of the M4 x 16 phillips flat head screws. See Figure 2.
9. Remove the upper screw from each of the lower IP positioning unit stop plates, leaving the lower screw to hold each stop plate in place. See Figure 2.
10. When properly installed, the side mounting brackets of the ion chamber sit flush against the IP positioning unit stop plates. Install the ion chamber using the two (2) screws removed in step 6 and the two (2) screws removed in step 9. Use the upper holes of the upper side mounting brackets and the lower holes of the lower side mounting brackets, running the mounting screws through the holes in the stop plates and into the threaded holes of the IP positioning unit. See Figure 3.
11. Reinstall the grid assembly using the POM bushings and M3 screws from Step 2. Make certain the POM bushings sit upon the grid mounting spacer plates added in Step 5. Also, check to see that the grid sensor flag moves without obstruction through the grid sensor. Make certain that the grid moves freely back and forth before turning on the system power. See Figure 4.
12. Mount the pre-amplifier assembly as shown using the two (2) M4 X6 screws, provided. See Figure 4.

13. Route the 17 foot ion chamber cable (p/n 75062-17 or 75054-17) through the cable clip at the bottom center of the chest stand. Dress the cable along existing cable routes through the chest stand avoiding sharp edges and moving parts.
14. Calibrate the unit as detailed in the calibration instructions included with the ion chamber.
15. After calibration, reinstall the covers of the Fuji FCR 9501-ES Chest Stand exposure unit in the following sequence.

Bottom Cover, Front Cover, Right-Hand Side Cover, Top Cover

Figure 1  
Grid Removal

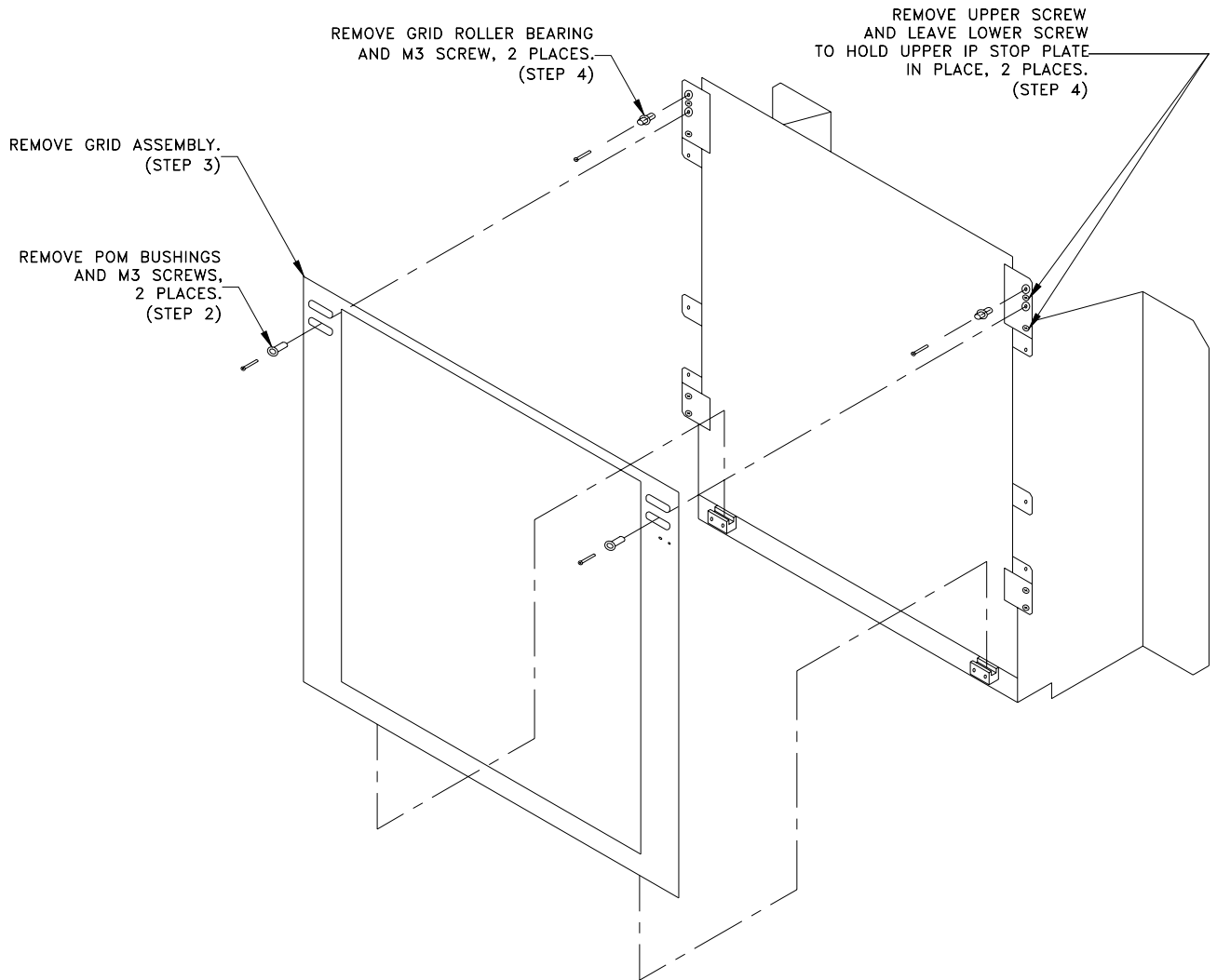


Figure 2  
Grid Spacer Plates

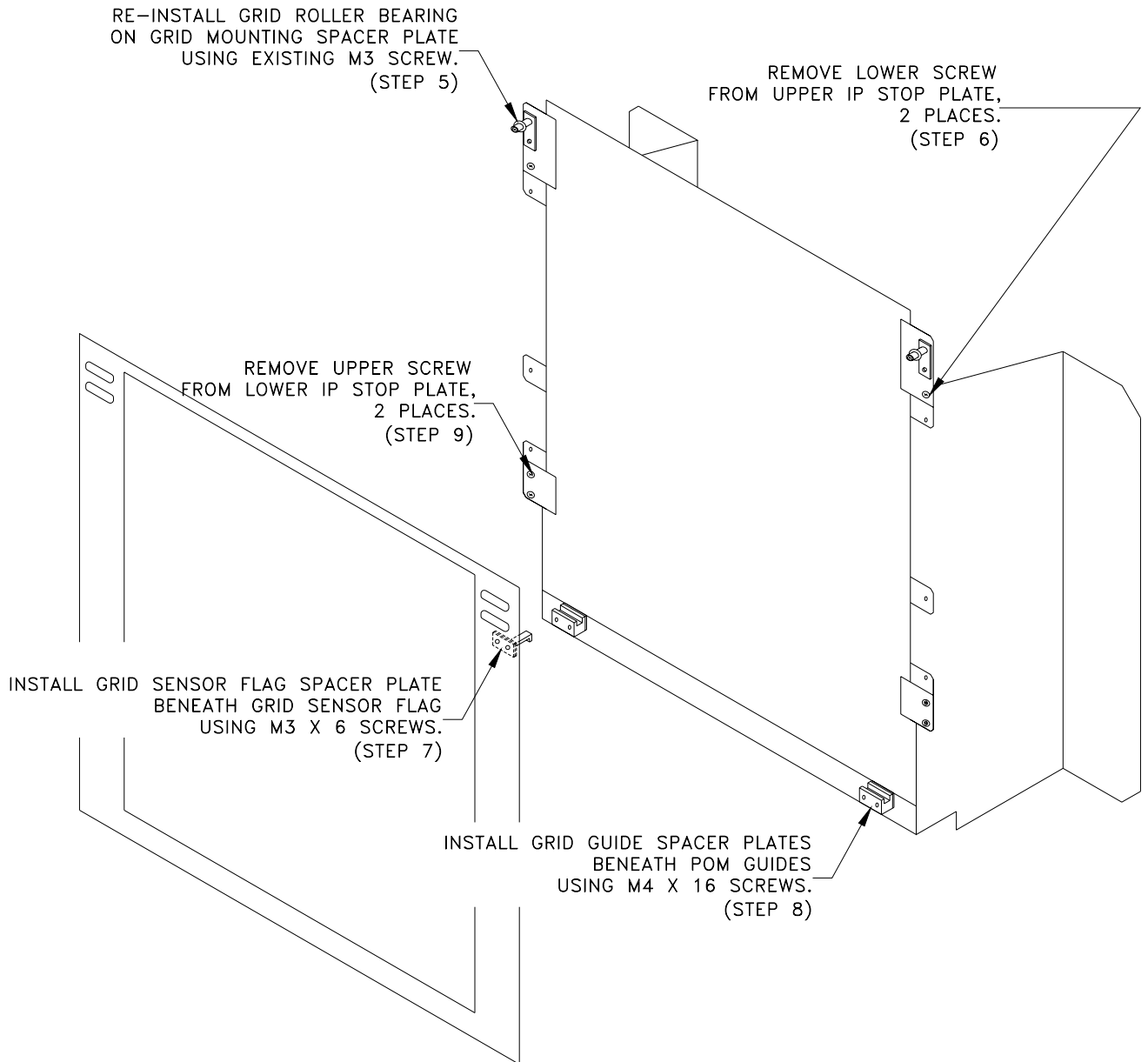


Figure 3  
Ion Chamber Mounting

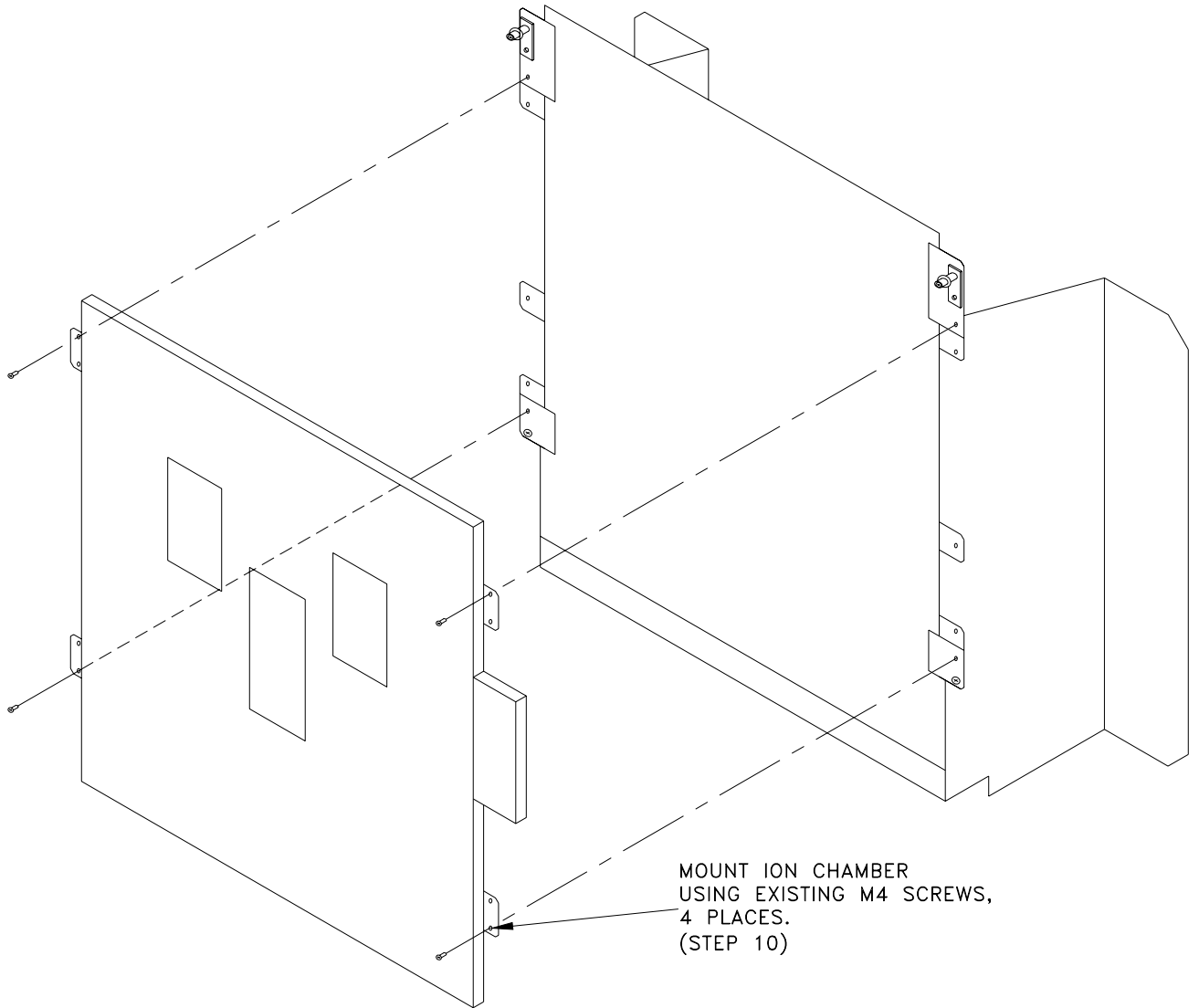


Figure 4  
Pre-amp Mounting Location

